(ELIOT). Both APBI and IORT patients have been followed prospectively with the same QoL questionnaires: 1 week, 3 months, 6 months and yearly after breast conserving treatment.

Results: In November 2014 the IORT part of the study accrued 192 patients; the APBI part 86 patients. The overall response for the QoL questionnaires was 82-98% at the different time points.

There is a non-significant (ns) difference in pain score (VAS 1-10) 1 week after surgery in favor of APBI patients. After completion of radiotherapy this difference is significant in favor of the APBI patients, maybe due to wound healing in the 4 to 5 weeks after breast conserving surgery. In time this difference changes, resulting in a significant difference in favor of IORT at 3 and 6 months.

For fatigue (EORTC C30) the results are comparable; more patients are tired (ns) just after surgery for IORT, but again less tired at 6 and 12 months. In the explorative analysis, so far, co morbidity, not age, seems to influence fatigue. Correcting for co morbidity fatigue at 6 and 12 months is significant better for IORT.

Mean QoL score	1 week after surg IORT/APBI	After RT APBI	3 month IORT/APBI	6 month IORT/APBI	1 year IORT/APBI
IORT pain	2.8		1.9 *	1.8 *	1.7
APBI pain	2.5	2.2 *	2.6	2.5	2.2
IORT fatigue	35		25	23**	21**
APBI fatigue	28	30	26	26	26

* significant less pain (VAS 1-10);
** significant less fatigue, when corrected for age and comorbidity (EORTC C30)

Conclusions: This preliminary analysis shows a significant better result for pain and fatigue for IORT compared to external beam APBI in the first year of follow up. An update of the results will be presented including the analysis of the confounding factors.

OC-0476

Clinical results of triple negative breast cancer patients treated by IOERT-boost during breast conserving surgery

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Purpose/Objective: To evaluate retrospectively survival and local control rates (LCR) of triple negative breast cancer (TNBC) subtypes classified in five marker negative (5-NP) and core basal (CB) after breast conserving surgery (BCS) and intraoperative radiotherapy with electrons (IOERT).

Materials and Methods: 71 TNBC patients were enrolled. All patients were treated with BCS, axillary lymph node dissection and received IOERT with a median dose maximum of 9.6 Gy as anticipated tumorbed boost, which was followed by whole breast irradiation (WBI) to median total doses of 54 Gy (range 51-57.6) in normofractionation (1.6 - 1.85 Gy (5Fx/week). Chemotherapy was applied neoadjuvant (12%), adjuvant (75%) or in combination (7%).

Results: After a median follow-up of 97 months (range 4-170) 5 ipsilateral breast tumor recurrences (IBTR) were detected (7.0%). 8-year actuarial rates of all TNBC patients for local control (LCR), metastases free survival (FFM), disease specific survival (DSS), and overall survival (OS) amount 91%, 75%, 80%, and 69%, respectively. Subgroupanalyses revealed a trend of inferior outcome for CB in DSS if compared to 5-NP (5-NP:83% vs CB:54% for G1/G2, p=0.27, 5-NP:90% vs CB: 79% for G3 tumors, p=0.30 and 5-NP G3: 90% vs CB G1/2: 54%, p=0.03), whereas LCR seemed to be negative influenced by tumor grading G3 (G1/2 (CB and 5-NP):100% vs G3: 88% (5-NP) and 90% (CB), p=0.65 and 0.82), both without statistical significance.

Conclusions: IOERT as boost modality during BCT of TNBC, provides acceptable LCR. CB-subtype and tumorgrading G3 are negative predictors for survival and LCR, respectively.

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Clinical data and physical parameters of IORT given as a boost during BCS followed by whole breast radiotherapy (WBI)

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Purpose/Objective: The aim of the study was to report effectiveness, quality of life, toxicity, cosmetic outcomes and physical parametres of intraoperative radiotherapy (IORT) given as a boost during breast conserving surgery (BCS) followed by adjuvant whole breast radiotherapy (WBI).

Materials and Methods: Between 2008 and 2011 in 150 breast cancers patients treated in our centre intraoperative radiotherapy as a tumor bed boost was applied using mobile electron accelerator Mobetron 1000 (IntraOp Medical, Inc.). IORT boost (10 Gy) was followed by 50 Gy whole-breast external beam radiotherapy (EBRT). Chemotherapy, if indicated, was given before EBRT. The observation period was 1,5-5,5 years.

Clinical outcomes was assessed by physical examination, photos of the breast with Harris-Limbergen scale, EORTC questionnaires (QLQ-C30 and QLQ-BR23), analysis of acute and late toxicity (CTCAE v 3.0 and LENT-SOMA scales), mammography, ultrasounds and chest X-ray.

Results: There was no local recurrences. Acute skin reactions in grade 1 and 2 were observed in 31% of pts in 1 month post RT and 9% in 6 months post RT, with no acute and late toxicities in grade 3 and 4.

The cosmetic outcome was good to excellent in 81,5% of pts 1 month post RT and 87% 3 years post RT.

Pain in breast was observed in 53 % pts 1 month post RT and 21% 6 months posr RT, hyperesthesia of the skin in 17,0 % pts. The data was tested with Mantel-Haenschel test. There was no statistical significance.

The late toxicity was evaluated one year after radiation therapy. The edema of breast was reported by 18 % of pts.

The telangiectasia of breast skin has occurred in 25 % of pts.

Retraction of the breast occurred in 39% of pts. Fibrosis was detected in 60% of patients.

There was no statistical significance change in quality of life in any follow-up period based on Friedman test analysis (p=0,2143).

Patients were treated using all available electron beam energies: 6 MeV energy was used in 58% cases but also 9 MeV,